

Figure 1A

GENE	RNA	BAC CLONE	SIZE (BP)	(AA)	POSITION	SNP	GENOME	RNA	PROTEIN	ALLELE FREQUENCY	GENOTYPE FREQUENCY
T2R1	AF227129	NM_019599			48928 - 49827 (-)	rs2234231 rs41469 rs2234232 rs2234233 rs2234234 rs2234235	C/T A/G G/A C/T C/T T/C	128 332 422 616 675 850	Pro/Leu (43) His/Arg (111) Cys/Tyr (141) Arg/Tyr (206) Ser/Ser (225) Leu/Leu (284)	* 43 : 3 (0.93 : 0.07) * * * *	A/A (0) : G/A (3) : G/G (20)
T2R3	AF227130	NM_016943			17576 - 18526 (+)	NEW rs2270009 NEW	C/T C/T C/T	349 807 852	Pro/Ser (117) Gly/Gly (269) Leu/Leu (284)	1 36 : 10 (0.78 : 0.22) 1	C/C (13) : C/T (10) : T/T (0)
T2R4	AF227131	NM_016944			31906 - 31805 (+)	rs2233995 rs2233996 rs2233997 rs2233998 rs2233999 rs2234000 rs2234001 rs2234002 rs2234003	G/A G/C A/C T/C T/A C/T G/C G/A G/A	8 9 17 20 186 221 286 512 571	Arg/Gln (3) Arg/Arg (3) Tyr/Ser (6) Phe/Ser (7) Phe/Leu (62) Thr/Met (74) Val/Leu (96) Ser/Asn (171) Ile/Val (191)	1 2 * 31 : 7 (0.82 : 0.12) 2 (only R seq) * 24 : 22 (0.52 : 0.48) 33 : 13 (0.72 : 0.28) *	T/T (12) : T/C (7) : C/C (0) G/G (6) : G/C (12) : C/C (5) G/G (11) : G/A (11) : A/A (1)
T2R5	AF227132	NM_018980			43779 - 44678 (+)	rs2234013 rs2227264 NEW rs2234014 NEW NEW rs2234015	G/A G/T C/T C/T G/A G/A G/A	58 77 235 338 363 500 638	Gly/Ser (20) Ser/Ile (26) Arg/Cys (79) Pro/Leu (113) Arg/Arg (121) Cys/Tyr (167) Arg/Gln (213)	* 28 : 12 (0.7 : 0.3) 1 2 (only R seq) 42 : 4 (0.91 : 0.09) 42 : 4 (0.91 : 0.09) 42 : 4 (0.91 : 0.09)	G/G (9) : G/T (10) : T/T (1) G/G (19) : G/A (4) : A/A (0) G/G (19) : G/A (4) : A/A (0) G/G (19) : G/A (4) : A/A (0)

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Figure 1B

GENE	RNA	BAC CLONE	SIZE (BP)	(AA)	POSITION	SNP	GENOME	RNA	PROTEIN	ALLELE FREQUENCY	GENOTYPE FREQUENCY
T2R7	AF227133 SEQ ID NO: 9/10	NM_023919 AC006518.17	957	318	525-1481 (-)	rs2234016 NEW rs3759251 NEW rs3759252 NEW rs619381	G/T A/T C/T C/A G/A	881 787 788 828 912	Arg/Leu (294) Thr/Ser (263) Thr/Met (263) Ile/Ile (276) Met/Ile (304)	1 * 43 : 3 (0.93 : 0.07) * *	C/C (20) : C/T (3) : T/T (0)
T2R8	AF227134 SEQ ID NO: 11/12	NM_023918 AC006518.17	930	309	4962 - 5891 (-)	NEW rs1548803 NEW rs2537817	A/G G/A T/C G/A	496 549 829 922	Arg/Gly (166) Leu/Leu (183) Tyr/His (277) Met/Val (308)	2 40 : 6 (0.87 : 0.13) 1 24 : 2 (0.55 : 0.45)	G/G (19) : G/A (2) : A/A (2) G/G (6) : G/A (12) : A/A (4)
T2R9	AF227135 SEQ ID NO: 13/14	NM_023917 AC006518.17	939	312	8048 - 8986 (-)	NEW NEW rs3741845 NEW NEW rs3944035 rs2159903	C/A T/A T/C G/T C/A C/T C/T	201 450 560 867 880 910 926	Phe/Leu (67) Asp/Glu (150) Val/Alu (187) Leu/Phe (289) Leu/Met (294) Leu/Phe (304) Pro/Leu (309)	43 : 3 (0.93 : 0.07) 41 : 3 (0.93 : 0.07) 34 : 10 (0.77 : 0.23) 1 1 * *	C/C (21) : C/A (1) : A/A (1) T/T (19) : T/A (3) : A/A (0) T/T (15) : T/C (4) : C/C (3)
T2R10	AF227136 SEQ ID NO: 15/16	NM_023921 AC006518.17	924	307	24257 - 25180 (-)	NEW rs597468 NEW NEW NEW	A/G C/T A/C A/G G/A	120 467 521 564 627	Leu/Leu (40) Thr/Met (156) Lys/Thr (174) Leu/Leu (188) Ser/Ser (209)	1 10 : 36 (0.22 : 0.78) 1 2 35 : 11 (0.76 : 0.24)	C/C (0) : C/T (10) : T/T (13) G/G (12) : G/A (11) : A/A (0)

Figure 1C

GENE	RNA	BAC CLONE	SIZE (BP)	(AA)	POSITION	SNP	GENOME	RNA	PROTEIN	ALLELE FREQUENCY	GENOTYPE FREQUENCY
T2R13	AF227137	NM_023920	912	303	107298 - 108209 (-)	rs1015443	A/G	776	Asn/Ser (259)	40 : 6 (0.87 : 0.13)	A/A (19) : A/G (2) : G/G (2)
SEQ ID NO: 17/18											
T2R14	AF227138	NM_023922	954	317	137165 - 138118 (-)	NEW rs3741843	A/G G/A	256 375	Thr/Ala (86) Arg/Arg (125)	2 26 : 12 (0.68 : 0.32)	G/G (9) : G/A (8) : A/A (2)
SEQ ID NO: 19/20											
T2R16	AF227139	NM_016945	876	291	10968 - 11843 (+)	rs2233988 NEW rs2692396 rs2233989 rs846664 rs860170 rs1204014	C/T G/A G/C T/C T/G G/A G/A	300 301 303 460 516 665 846	Thr/Thr (100) Val/Met (101) Val/Val (101) Leu/Leu (154) Asn/Lyn (172) Arg/His (222) Thr/Thr (282)	26 : 12 (0.68 : 0.32) 1 26 : 12 (0.68 : 0.32) 34 : 4 (0.89 : 0.11) 26 : 12 (0.68 : 0.32) 7 : 39 (0.15 : 0.85) 26 : 12 (0.68 : 0.32)	C/C (9) : C/T (8) : T/T (2) G/C (9) : G/C (8) : C/C (2) T/T (15) : T/C (4) : N : 4 (0) T/T (9) : T/G (8) : G/G (2) G/G (0) : G/A (7) : A/A (16) G/G (11) : G/A (9) : A/A (3)
SEQ ID NO: 21/22											
T2R38	AF494231	NM_176817	1002	333	55139 - 56130 (+)	rs713598 NEW rs1726866 NEW NEW	C/G G/A C/T C/T G/A	145 239 785 820 886	Pro/Ala (49) Arg/His (80) Ala/Val (262) Arg/Cys (274) Val/Ile (296)	1 1 or 2	
SEQ ID NO: 23/24											
T2R39	AF494230		014 (1017)	337 (333)	112 - 1117 (+)	NEW NEW rs4103817	C/T G/A G/A	578 589 874	Ser/Phe (193) Lys/Glu (197) Met/Ile (258)	41 : 3 (0.93 : 0.07) 41 : 3 (0.93 : 0.07) *	C/C (19) : T/C (3) : T/T (0) A/A (19) : A/G (3) : G/G (0)
SEQ ID NO: 25/26											
T2R40	AF494229		972	323	38761 - 39732 (+)	NEW NEW	C/A G/A	560 817	Ser/Tyr (187) Thr/Ala (273)	38 : 8 (0.83 : 0.17) 39 : 3 (0.93 : 0.07)	C/C (17) : C/A (4) : A/A (2) G/G (0) : G/A (3) : A/A (18)
SEQ ID NO: 27/28											

Figure 1D

GENE	RNA	BAC CLONE	SIZE (BP)	(AA)	POSITION	SNP	GENOME	RNA	PROTEIN	ALLELE FREQUENCY	GENOTYPE FREQUENCY
T2R41 (PTC01) SEQ ID NO: 29/30	AF494232	AC073264.5	924	307	27192 - 28115 (+)	rs1404635 NEW NEW	G/A C/T T/A	189 380 584	Thr/Thr (63) Pro/Leu (127) Val/Asp (195)	1 1 1	
T2R43 SEQ ID NO: 31/32	AF494237	AC018630.40	930	309	48459 - 49388 (+)	NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW	G/C G/A G/C T/G G/T G/A C/G T/G T/C A/G	104 270 460 510 599 635 663 882 883 889	Trp/Ser (35) Val/Val (90) Arg/Gly (145) Ser/Arg (170) Cys/Phe (200) Arg/His (212) Thr/Thr (221) Phe/Leu (294) Trp/Arg (295) Met/Val (297)	30 : 4 (0.88 : 0.12) 1 (RC11) 1 (RC11) 1 (RC11) 1 (RC11) 4 : 30 (0.12 : 0.88) 31 : 3 (0.91 : 0.09) 1 (RC11) 1 (RC11) 1 (RC11)	G/G (15) : G/C (0) : C/C (2) G/G (2) : G/A (0) : A/A (20) C/C (15) : G/G (1) : G/G (1)
T2R44 SEQ ID NO: 33/34	AF494228	AC018630.40	930	309	109353 - 110282 (+)	NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW	C/T T/C T/A G/A C/G C/T G/A A/G C/G G/A	103 423 484 599 649 680 718 744 827 843	Arg/Trp (35) Ala/Ala (141) Met/Leu (162) Cys/Tyr (200) Gln/Glu (217) Ala/Val (227) Val/Ile (240) Ser/Ser (248) Pro/Arg (276) Trp/* (281)	38 : 6 (0.84 : 0.14) 5 : 39 (0.11 : 0.89) 34 : 10 (0.11 : 0.23) 2 1 8 : 38 (0.17 : 0.83) 7 : 39 (0.43 : 0.67) 3 : 43 (0.07 : 0.93) 1 (RC11)	C/C (18) : C/T (2) : T/T (2) T/T (18) : T/C (3) : C/C (1) T/T (15) : T/A (4) : A/A (2) C/C (17) : C/T (4) : T/T (2) G/G (18) : G/A (3) : A/A (2) A/A (0) : G/A (3) : G/G (20)
T2R45 AF494266			900	299	?	NEW	G/A	843	Trp/* (281)	1 (RC11)	

Figure 1E

GENE	RNA	BAC CLONE	SIZE (BP)	(AA)	POSITION	SNP	GENOME	RNA	PROTEIN	ALLELE FREQUENCY	GENOTYPE FREQUENCY
T2R46	AF494227	AC018630.40	900 (930)	299 (309)	78394 - 79323 (+)	NEW NEW NEW NEW	T/G T/A G/A C/T	106 682 749 862	Phe/Val (36) Leu/Met (228) Trp/* (250) Gln/* (288)	43 : 3 (0.93 : 0.07) 39 : 7 (0.85 : 0.15) 40 : 6 (0.87 : 0.13) 1 (RC11)	T/T (20) : T/G (3) : G/G (0) T/T (18) : T/A (3) : A/A (2) G/G (18) : G/A (4) : A/A (1)
T2R47	AF494233	AC018630.40	980	319	6444 - 7403 (+)	rs2597925 rs2597924 rs1669405 rs2599404	G/A G/A T/G T/G	934 920 842 756	Gly/Gly (314) Arg/His (307) Leu/Trp (281) Phe/Leu (252)	? ? ? ?	
T2R48	AF494234	AC018630.40	900	299	118117 - 119016 (+)	NEW NEW NEW NEW NEW NEW NEW NEW NEW NEW	C/T G/A A/C T/C A/T A/G T/C G/C G/A C/T	84 94 326 418 456 673 719 799 885 895	Ala/Ala (28) Val/Ile (32) Lys/Thr (109) Leu/Leu (140) Arg/Ser (152) Ile/Val (225) Ile/Thr (240) Val/Leu (267) Trp/* (295) Arg/Cys (299)	38 : 8 (0.83 : 0.17) 33 : 13 (0.72 : 0.28) 1 12 : 34 (0.26 : 0.74) 1 1 1 1 1 (PTC12) 38 : 8 (0.83 : 0.17)	C/C (17) : C/T (4) : T/T (2) G/G (12) : G/A (9) : A/A (2) T/T (4) : T/C (4) : C/C (15) C/C (17) : C/T (4) : T/T (2)
T2R49	AF494236	AC018630.40	930	309	142813 - 143742 (+)	NEW NEW NEW NEW NEW NEW NEW	A/G C/T G/A C/A C/A G/A A/G	156 261 421 429 442 516 706	Ala/Ala (52) Ala/Ala (87) Val/Ile (141) His/Gln (143) His/Asn (148) Met/Ile (172) Ile/Val (236)	6 : 32 (0.16 : 0.84) 32 : 6 (0.84 : 0.16) 35 : 3 (0.92 : 0.08) 32 : 6 (0.84 : 0.16) 29 : 9 (0.76 : 0.24) 1 6 : 32 (0.16 : 0.84)	A/A (15) : A/G (2) : G/G (2) C/C (15) : C/T (2) : T/T (2) G/G (16) : G/A (3) : A/A (0) C/C (15) : C/A (2) : A/A (2) C/C (15) : C/A (5) : A/A (2) A/A (15) : A/G (2) : G/G (2)

Figure 1 F

GENE	RNA	BAC CLONE	SIZE (BP)	(AA)	POSITION	SNP	GENOME	RNA	PROTEIN	ALLELE FREQUENCY	GENOTYPE FREQUENCY
T2R50	AF494235 SEQ ID NO: 43/44					NEW NEW NEW	T/C G/T A/G	755 764 808	Phe/Ser (252) Arg/Leu (255) Ile/Val (270)	32 : 6 (0.84 : 0.16) 32 : 6 (0.84 : 0.16) 2	T/T (15) : T/C (2) : C/C (2) G/G (15) : G/T (2) : T/T (2)
T2R60	AY114094 SEQ ID NO: 45/46	AC018630.40 NM_177437	900 957	299 318	153828 - 154727 (+) 62817 - 63773 (+)	rs1376251 NEW NEW	G/A A/T C/T	608 595 930	Tyr/Cys (203) Met/Leu (199) Arg/Arg (310)	? 3 : 31 (0.09 : 0.91) 24 : 22 (0.52 : 0.48)	A/A (13) : A/T (3) : T/T (0) C/C (7) : C/T (8) : T/T (8)

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FIGURE 2

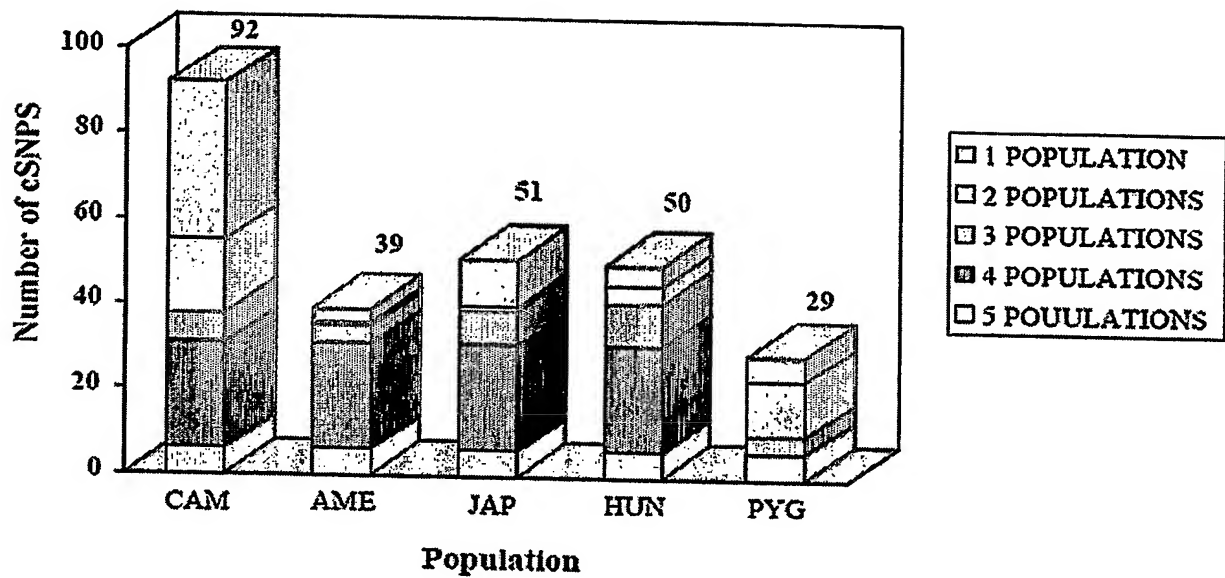


FIGURE 3

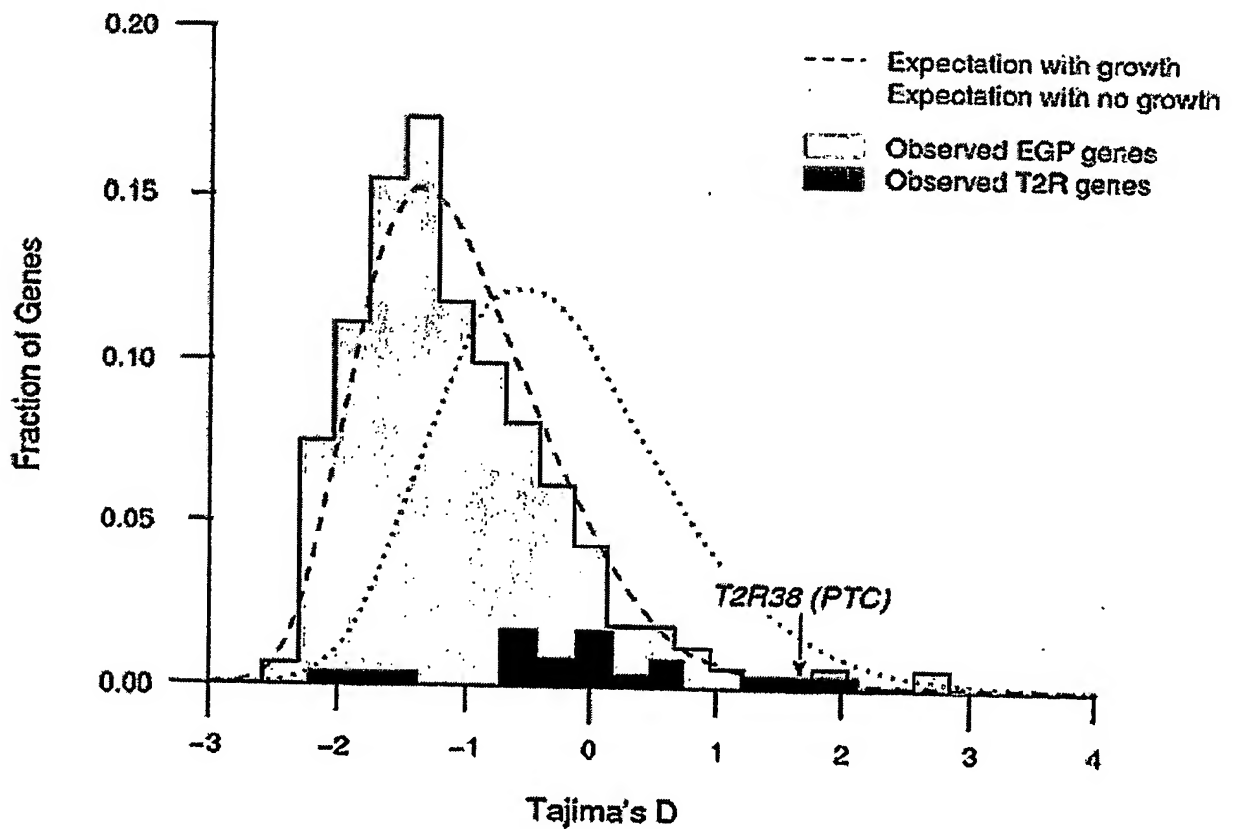


FIGURE 4

Cluster 1

Cluster 2

